January 1941

Test 377: Massey-Harris Model 101-R

Tractor Museum
University of Nebraska-Lincoln, TractorMuseumArchives@unl.edu

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AGRICULTURAL COLLEGE, LINCOLN

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

REMARKS

1. All results shown on pages 1 and 2 of this report were determined from observed data and without allowances, additions or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower and data from these tests was used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, H, J and K were made with an operating setting of the carburetor (selected by the manufacturer of 95.1% of maximum belt horsepower.

	DRAWBAR	BELT
2. Observed maximum horsepower (tests F and B)	34.63	46.97
3. Sea level (calculated maximum horsepower (based on 60°F. and 29.92" Hg.)	36.67	47.91
4. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly A.S.A.E. and S.A.E. ratings)	27.50	40.72

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 377.

Carlton L. Zink
Engineer-in-Charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers

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Dates of test: September 30 to October 20, 1941
Name and model of tractor: MASSEY HARRIS 101 R
Manufacturer: The Massey Harris Company, Racine, Wisconsin
Manufacturer's rating: NOT RATED

BRAKE HORSEPOWER TESTS

Hp.	Crank-shaft Speed R.P.M.	Fuel Consumption			Water Used Gal. per Hr.	Temperature Deg. F.		Barometer Inches of Mercury
		Gal. per Hr.	Hp.-hr. per Gal.	Lb. per Hp.-hr.		Cooling Medium	Air	
TEST B - 100% MAXIMUM LOAD - TWO HOURS								
46.97	1802	4.008	11.72	0.520	0.000	173	54	29.160
TEST C - OPERATING MAXIMUM LOAD - ONE HOUR								
44.11	1799	3.701	11.92	0.511	0.000	177	69	29.210
* TEST D - ONE HOUR								
40.90	1801	3.537	11.56	0.527	0.000	183	79	29.185
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)								
40.90	1799	3.542	11.55	0.527	- -- -	184	80	- - - - -
1.22	1970	1.384	0.88	6.910	- - - -	160	81	- - - - -
21.78	1905	2.433	8.95	0.680	- - - -	169	80	- - - - -
42.82	1800	3.645	11.75	0.518	- - - -	186	81	- - - - -
11.02	1926	1.803	6.11	0.996	- - - -	164	80	- - - - -
32.32	1892	3.054	10.58	0.575	- - - -	177	81	- - - -
25.01	1882	2.644	9.46	0.644		173	80	29.145

* Formerly called RATED LOAD; see REMARKS 4, page 5.

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DRAWBAR HORSEPOWER TESTS

Hp.	Draw-bar Pull Lbs.	Speed Miles per Hr.	Crank-shaft Speed R.P.M.	Slip of Drive Wheels %	Fuel Consumption			Water Used Gal. per Hr.	Temp. Deg. F.		Barometer Inches of Mercury
					Gal. per Hr.	Hp.-hr. per Gal.	Lb. per Hp.-hr.		Cool-ing Med.	Air	

Rear wheels, tires and added weight used in Tests F, G and H: Pressed steel wheels; 11-38, 6 ply tires and 1081 lbs. added weight per wheel.

TEST F - 100% MAXIMUM LOAD - Third GEAR

34.63	2747	4.73	1500	6.51	——Not Recorded——				187	75	28.650

TEST G - OPERATING MAXIMUM LOAD

23.68	3905	2.27	1500	15.84	——Not Recorded——				182	81	28.610
31.90	3520	3.40	1501	10.04	" "				184	77	28.650
33.32	2627	4.76	1500	5.93	" "				182	73	28.650

*TEST H - TEN HOURS - Third GEAR

28.08	2204	4.78	1500	4.91	2.794	10.05	0.606	0.000	169	60	29.065

TEST J - OPERATING MAXIMUM LOAD

Same wheels and tires as used in Tests F, G and H, All added weitht removed from tractor (liquid, cast iron or any other added forms). Third gear.

28.09	2426	4.34	1490	14.43	——Not Recorded——				172	63	29.250

TEST K - OPERATING MAXIMUM LOAD

Rear wheels, tires and added weight used: Pressed steel wheels; 10-38, 6 ply tires and no added weitht per wheel (**Combination No. 2). Third gear.

23.86	2121	4.22	1500	13.94	——Not Recorded——				170	68	29.210

* Formerly called RATED LOAD; see REMARKS 4, page 5.

** Combination No. 1: Includes wheels, tires and added weight recommended in the manufacturer's published specifications.

Combination No. 2: When the manufacturer does not make a specificrecommendation then the tires used are the smallest size and ply and the wheels are the lightest listed in published specifications or the application for test.

See page 3 for specifications on wheels, tires and weight.

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FUEL, OIL AND TIME

Fuel Gasoline Octane 73 Weight per gallon 6.09 pounds

Oil: S.A.E. No. 10 To motor 1.432 gal. Drained from motor 1.052 gal.

Total time motor was operated 46 hours.

TIRES, WHEELS, AND WEIGHT

		TESTS F, G & H	TEST J	TEST K
Rear Wheel: (each)	Type and Weight	Pressed Steel 150 lbs	Pressed Steel 150 lbs	Pressed Steel 145 lbs
	Liquid Ballast	361 lbs	None	None
	Added Cast Iron	720 lbs	None	None
Rear Tires:	No., Size & Ply	2, 11-38, 6 ply	2, 11-38, 6 ply	2, 10-36, 6 ply
	Type of Tread	Ground Grip	Ground Grip	Ground Grip
	Make	Firestone	Firestone	Firestone
	Air Pressure	16 lbs	16 lbs	16 lbs
Front Wheel: (each)	Type and Weight	Pressed Steel 27 lbs	Pressed Steel 27 lbs	Pressed Steel 27 lbs
	Liquid Ballast	22 lbs	None	None
	Added Cast Iron	None	None	None
FrontTTires:	No., Size & Ply	2, 5.00-15, 4 ply	2, 5.00-15, 4 ply	2, 5.00-15, 4 ply
	Type of Tread	Guide Grip	Guide Grip	Guide Grip
	Make	Firestone	Firestone	Firestone
	Air Pressure	28 lbs	28 lbs	28 lbs
Height of Drawbar		19"	19 1/2"	18 1/2"
Static Weight:	Rear End	4625 lbs	2460 lbs	2370 lbs
	Front End	1265 lbs	1225 lbs	1230 lbs
Total Weight as tested (with operator)		6070 lbs	3865 lbs	3780 lbs

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CHASSIS

Type Tricycle Serial No. 258390 Drive Enclosed gear

Tread width: Rear 52" to 88" Front: (Top 12 1/2" and 19 3/8"
(Bottom 8 1/4" and 14 7/8"

Advertised speeds, miles per hour: First 2.68 Second 3.74 Third 5.00

Fourth (1800 r.p.m.) 17.85 Reverse 2.40

Belt Pulley: Diam. 13 1/2" Face 6 1/4" R.P.M. 838 Belt Speed 2960 f.p.m.

Clutch: Make Borg and Beck Type Dry disc Operated by Foot

Seat Pressed steel

Brakes: Make Own Type Internal expanding

Location Bull gear pinion

Gear reduction (brake drum to rear wheel) 5.077 to 1

Operated by Right foot on adjacent pedals, either independently or interlocked

Locked by Ratch and latch

Equalization None

MOTOR

Make Chrysler Serial No. T112-501-525 Type 6 cylinder, vertical

Head L Mounting Crankshaft lengthwise Lubrication Pressure

Bore and stroke 3 1/4" x 4 3/8" Rated R.P.M. (Drawbar 1500
(Belt 1800

Port diameter valves: Inlet 1 13/32" Exhaust 1 9/32"

Ignition: Type Battery Make Auto-Lite Distributor Model IGZ-E06979

Generator: Make Auto-Lite Model GBM-4610A5

Starter: Make Auto Lite Model MAW-4013-A

Carburetor: Make Marvel-Schebler Model TRX-22 Size 1"

Governor: Make Novi Type Variable speed, centrifugal

Air Cleaner: Make United Type Oil-washed, crimped wire filter

Oil Filter: Make Purolator Products, Inc. Type Renewable waste-packed element

Cooling medium temperature control: Fulton thermostat